Using images to develop group discussion and actions for sustainable development

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Abstract

This paper presents an activity that uses photographs to assist learners in developing their understanding of sustainable development. The activity can be adapted and delivered to suit learners and participants of different ages. Small group discussions provide participants with an opportunity to engage with the topic of sustainability, individual learners explore their own understanding of sustainability and the perceptions of others, a diamond ranking activity allows group members to make connections, scrutinise and compare their perceptions and develop potential actions that could positively contribute to sustainable development. Each group's concluding proposal for an action plan to deliver a sustainable development idea reaffirms the importance of the key sustainable development principle of participation in decision making. Throughout, learners' critical reflection and communication are developed using the participatory approach.

Key words: education for sustainable development, participatory, learner-centred

Link to article

https://educationstudies.org.uk/?p=16050

Introduction

Supporting learners to act for the planet is more pertinent than ever, as many issues such as increasing deforestation, the loss of coral cover and inequalities in wealth distribution across the world drive individuals, communities, action groups and nations to strive for a more sustainable development and equity, as the 'way we currently live

is not sustainable' (UNESCO, 2021: 3). However, there is a lack of consistency in the inclusion of environmental issues in the school curriculum. UNESCO report that over half of the member states' education policies and curricula studies make no mention of climate change (UNESCO, 2021). Priority areas in the United Nations Education for Sustainable Development (ESD) for 2030 framework emphasise the importance of recognising that young people are key actors in addressing sustainability challenges and the related decision making required, with local actions considered to be where '...meaningful transformative actions...' are likely (UNESCO, 2020: 9).

The following learning activity provides an approach to supporting young people's acquisition of the knowledge, skills and attributes which contribute to facilitating the transformation that is needed (Sterling, 2011; Schnitzler, 2019). By engaging in the learner-centred interactive activity, learners have an opportunity to begin to experience their own 'awakening' moment/s and explore their perception of an issue as the resultant open-ended discussion allows them to examine multiple perspectives (Leicht, Heiss and Byun, 2018: 7; UNESCO, 2019). This activity is considered to be excellent and innovative in that the focus of the group-work discussions is determined by the learner as opposed to the teacher, with a range of learning styles facilitated. For instance, learners search through and handle the photographs reflecting visual and kinaesthetic-tactile learning with social learning also evident. The overview of potential sustainable actions also delivers opportunities for auditory and verbal activities. Communication and collaboration are prominent, and such activities are believed to support learner improvement in attitude and self-confidence (Du Plessis, 2020; Shah, 2020). This is particularly pertinent for exploring sustainability issues with an essential pedagogy that includes active learner involvement – which is not always the case in schools (Mogren and Gericke, 2017; Christie and Higgins, 2020). The activity moves from the individual perception to an agreed group idea and on to proposing a sustainable action – providing a holistic activity that moves learners from theory to action.

This activity has been used extensively with a range of learners. The example discussed here focuses on learners aged 8-18 years. A lesson plan is provided in Appendix A.

Exploring perceptions of sustainability

Sustainability, sustainable development, and sustainable literacy are a few of the alternative terms used in government policies and academic literature, and there are multiple definitions and applications (Waas *et al*., 2011; Emas, 2015). The term 'sustainable development' began to be widely adopted as a result of the Brundtland Commission's definition that highlighted the importance of meeting the needs of the present generation without compromising that of future generations (United Nations, 1987: 15). However, it is much more complicated than the initial definition might lead us to understand (Blewitt, 2008; Martin, Jucker and Martin, 2010; Sachs, 2015), and it is this complexity and accommodation of differing viewpoints that provide the impetus for the learner discussions at the outset of the activity. The thinking and questioning that takes place all contribute to developing each learner's understanding as they develop their own interpretation, make connections with the views of others and consider the differing perspectives to draw conclusions (Ritchhart, Church and Morrison, 2011). The use of appropriate resources targets curiosity, collaboration and critical thinking – all important learner capabilities (Lucas and Spencer, 2017). The approach adopted for this activity illustrates a pedagogy that stimulates learners to ask questions which is critical for learning (Manalo, 2020; Aflalo, 2021), and to promote the development of the skills and values necessary for a 'sustainable society' (Laurie *et al*., 2016: 231).

Learning objectives

- To develop effective global citizenship skills by critically reflecting on individual and group understandings of sustainable development/ sustainability.
- To appreciate the diversity and complexity of sustainability issues.
- To appreciate that many different actions can be successful in working towards sustainable development.
- To work as a group to generate an action plan to positively impact sustainable development.

Facilitating the activity

Learners work in small groups (4-6); each group has approximately 50-60 photographs on their table and begins by spending a few minutes familiarising themselves with these (no specific task is expected during this stage; the groups look at the images and begin discussing what they are) – the images are provided in 'hard copy' so that learners can handle them. The use of images supports learners' visual literacy as thoughts and ideas are expressed visually (Gangwer, 2009; Little, 2015; Newman and Ogle, 2019). Figure 1, illustrates a sample of the images used. These images are available, or people may wish to develop their own resources. This part of the activity can also be conducted by displaying the images around the room and learners move to view them.

Figure 1: A few of the images learners engage with at the beginning of the activity (Some of these images are available for practitioners to use to deliver this activity or to support other learning activities; they can be retrieved from: https://osier.ac.uk/365/).

Once learners have explored the images sufficiently, each group member selects one image that they feel reflects their understanding of 'sustainability/ sustainable development'. If required, the group can be reminded of the widely accepted definition of sustainable development – enabling all people to satisfy their needs and enjoy a better quality of life without compromising the quality of life for future generations.

Learners discuss their choice of image with their group, articulating how their understanding of sustainable development is reflected in the image. After each member of the group has explained their image, each group develops and agrees on a definition of 'sustainability/sustainable development'. By engaging in such discussions participants also develop their ability to understand different perspectives and try to resolve any different views, as well as providing opportunity to develop a 'conscious awareness' of others' feelings, which promotes a social perspective (Lin *et al*., 2019: 2226). It is also proposed that discussions that focus on agreement as opposed to argument can positively impact learning (Garcia-Mila *et al*., 2013). Depending on the number of groups involved it may be feasible to include a whole-class discussion that explores each group's definition. Now that the groups understand the potential complexity involved in defining sustainable development they should be prepared to value the range of actions to be discussed.

Diamond ranking activity

Nine different potential sustainable development actions are described to the groups. These can be presented according to the age/ability of the group concerned – including an overview of the activity and/or the use of props to illustrate; quiz questions can be used, such as the average number of mobile phones in each household, or how long it takes for particular foods to biodegrade. Again, these can be adapted depending on the age group. (Appendix B contains nine cards to use for the activity.) Some of the actions include planting a wildlife garden, recycling paper, composting waste, saving energy, less car use, campaigning for change. Each group is tasked with using diamond ranking to sort the actions in order of importance. No further explanation of what importance means is provided – it is up to each group to determine how they interpret this. Figure 2 is an example of one group's final ranking. A strength of using this approach is that, as each action is ranked, the decision is discussed and relationships made by each learner and in so doing understanding is scrutinised and compared (Clark, 2012). This participatory pedagogy also helps to develop learners' 'investigative, reflective and communicative' skills, as they develop their own thinking (Neimi *et al.*, 2015: 139). The approach adopted reflects an excellent example of the application of learner participation and thinking skills. Also, decision-making skills that

learners will require in future are promoted, and some propose that these can often be lacking in classroom teaching methods (Yli-Panula, Jeronen and Lemmetty, 2019).

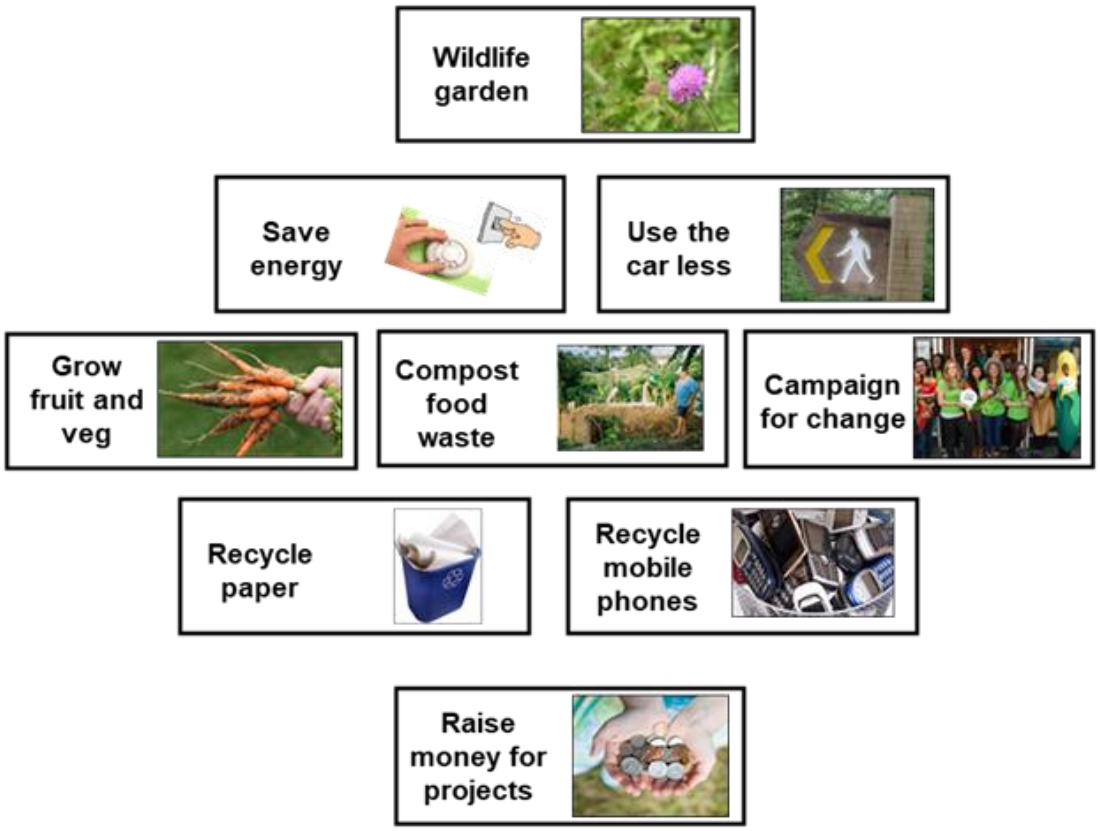

Figure 2: The nine sustainability actions ranked in order of importance by learners

Depending on the class size and time available, it may be possible for each group to share their diamond rank with the rest of the class, presenting the reasoning for their ranking. There is also an option to include scoring – and to compile an overall class ranking by allocating ten points for first place, eight for each of the actions placed in the second row, six for those in the middle row, four points for the fourth row and two points for the action ranked last. The data for the scoring can be either collected and totalled at the time to produce the thoughts from the whole class or a photograph of each group's final ranking taken, and the data used during a later numeracy/maths session.

Proposing actions

The final element of the session requires each group to propose an action that will positively contribute to sustainable development. Figure 3 can be used to scaffold the

groups' responses. The remit for this can be tailored according to the circumstances. For instance, it could be an action for the class to consider implementing, an action that could be presented to the school council, staff or governing body for the school community to potentially adopt or a wider society action, which the learners could develop a campaign for. Alternatively, one of the actions included in the diamond ranking exercise could be developed. Each group has a large piece of paper and writing materials to use to describe and explain their idea to the whole class.

Figure 3: Template to support each group's sustainable development action ideas

Following the presentation of each group's idea to the rest of the class, the whole class could vote on which action to develop further and deliver and/or present to the school council/governing body for approval before delivering the action. Alternatively, each group could be tasked with developing their idea further, setting targets, devising an action plan and delivering it, depending on the original remit.

By directly engaging in the thinking of the other members of the group, a positive collaborative idea can result, as each learner listens and responds and new concepts can result as the group is required to problem solve (Kuhn, 2015). The learners have the opportunity to express their ideas and draw on their own life experiences and

influences as they develop a potential sustainable development action (Eames, Barker and Scarff, 2018).

To complete the activity, each group decides where their proposed sustainable development idea could be inserted into their original diamond ranking. Throughout the activity the teacher is providing effective scaffolding for learners. For instance, the range of actions are described and explained; and as the learners discuss ideas and concepts within their small working groups and then move to the larger whole class there are opportunities for consolidation of learning to take place (Hewitt, 2014).

Adaptations

The outline provided here focuses on delivering this activity to school-aged learners. The activity has also been delivered to higher education learners and management staff. The first stages of the activity remain the same – with group participants exploring their perceptions of sustainable development and developing an agreed definition. However, for the diamond ranking exercise nine activities supporting sustainable development in higher education are explained. Previously delivered sessions included examples from Wales and Brazil such as: a specific module for learners on sustainability living; a project to convert waste cooking oil to biodiesel on a university campus; a partnership project linking university staff and students to an overseas community – providing fundraising and professional support for local communities; a community biodiversity project; a social enterprise to develop solar power; a waste recycling co-operative (Diniz and Glover, 2011). Proposals for possible future actions are also discussed, as noted above.

Concluding comment

This learner-centred, interactive activity requires learners to think and question as they explore their understanding of sustainable development. This type of approach is critical in developing attributes to support sustainability and the transformation believed to be needed (Sterling, 2011; Laurie, *et al*., 2016; Schnitzler, 2019; Manalo, 2020). The inclusion of a diamond ranking exercise promotes a deeper examination of views and helps learners to clarify their own thinking (Clark, 2012; Neimi, Kumpulainen and Lipponen, 2015). The activity has proved to be very engaging and

stimulating for participants, as their small group discussions build on their understanding of sustainable development to develop potential actions that could be implemented and have impact. The activity also provides many opportunities for a broad cross-curricular input, as learners demonstrate enterprise and innovation in their ideas, and as they develop a sense of responsibility for the environment and their role as citizens. Scientific knowledge and understanding can be introduced with specific information focusing on recycling and energy conservation; numeracy can also be included if it is decided to score the groups' rankings. Important skills such as critical thinking, collaboration and communication underpin the whole process.

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Appendix A: Lesson plan

Actions for sustainable development

Lesson outline

Using supplied images, learners explore their understanding and perceptions of sustainable development. Diamond ranking of actions is completed by each group; this allows for reflection as to what they perceive is important. Finally, each group proposes actions to undertake.
(Time indications included in brackets for an hour session.)

Learning objectives

- To develop effective global citizenship skills by critically reflecting on individual and group understandings of sustainable development/ sustainability.
- To appreciate the diversity and complexity of sustainability issues.
- To appreciate that many different actions can be successful in working towards sustainable development.
- To work as a group to generate an action plan to positively impact sustainable development.

Resources

- Selection of images for each group of 4-6 learners.
- Set of diamond ranking cards for each group.
- PowerPoint to support explanation of diamond ranking sustainable development actions.
- Large piece of paper and writing materials for group ideas.

Activity 1: Introduction (5 minutes)

Groups explore the photographs; sustainable development introduced (definition included).

Activity 2: Explore understanding of sustainable development (20 minutes)

Using the selection of images learners select one image each and discuss with the rest of their group how the image reflects their understanding of sustainable development.

Activity 3: Diamond ranking exercise (25 minutes)

Nine different sustainable development actions presented, each group decide on the ranking of the actions, in order of importance. No other instructions given; it is up to the learners to decide what 'importance' means. Each group presents their diamond rank to the other groups, explaining how they decided on what was the most important.

Activity 4: Propose actions for sustainable development (10 minutes)

Each group proposes an action, these could expand on the ones presented or be completely new, targets and an action plan could be presented. Each group could also discuss where their proposed action/s could be inserted into the original diamond ranking.

Cross-curricular links: Geography: how people interact with their environment, developing a sense of responsibility for the environment and their role as global citizens; Science: recycling of materials and the conservation of energy, sustainability and the impact of humans within their locality and wider community; enterprise and innovation, having regard for sustainability and environmental issues; thinking and communication skills, and numeracy.

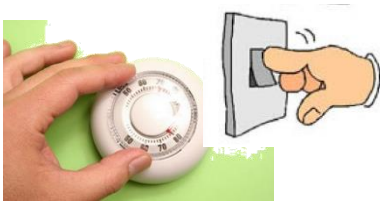
Appendix B: Cards for diamond ranking

Wildlife garden

Recycle paper

Compost food waste

Save energy



Use the car less

Recycle mobile phones

Raise money for projects

Campaign for change

Grow fruit and vegetables